[chairside essentials]
1st QUARTER 2015

Office Maintenance

What You Should Know to Reduce Your Operating Costs

Also Inside:

It's Just a Business Decision

Noteworthy & New Products

Hand Hygiene and Hand Care for Dental Professionals

[Equipment] Maintenance

What You Should Know?

It's the time of year to start fresh and get things going in the right direction. At this time of year, many offices set production goals, evaluate work schedules, fee schedules and many other areas in order to plan for a more successful year than last. One area that is often overlooked until it becomes a problem is the maintenance required on dental equipment.

Managing and Reducing Office Operating Costs:

The costs of operating a dental practice are numerous. However, when you categorize these costs and plan your office budget to account for them, they can be managed quite easily. Good management of expenses results in more money in your pocket at the end of the year. One office expense that is routinely overlooked and therefore tends to pop up at inopportune times is the cost of maintaining equipment. These costs need to be figured and planned for in the office operations budget. If these expenses are not planned for, these maintenance items generally don't get done. This leads to expensive unplanned equipment repairs or replacement. By planning for appropriate maintenance, your equipment investments will last much longer and your total operating expenses will be less.

[Maintenance Zones]

The dental office can be broken down into 6 zones for office maintenance:

[Sterilization]

[Equipment Room]

[Operatories]

[Laboratory]

[Dark Room & Image Scanners]

[Computer Hardware & Software]

1 Knowing What Requires Routine Maintenance

Working with your Nashville Dental account representative, take an inventory of the equipment items in your office that require routine maintenance. Of these items, most recommend, daily, weekly, and monthly maintenance. Several equipment items recommend annual maintenance **that should be performed by a service technician.** Make a note of which items need to be maintained by trained service technicians.

2 Develop A Maintenance Plan for the Office

Once an inventory list is compiled, it's best to develop a maintenance plan. This would include schedules for routine maintenance, maintenance assignments, if this is part of the dental team's job descriptions, and inventorying necessary supplies to perform routine maintenance. Pre-schedule with NDI's service department for semi-annual and annual service calls to take care of items requiring professional maintenance or for those items that the team finds impossible to get done due to lack of time.

3 Provide Proper Team Training

Team training is critical for maintenance to be performed correctly. This can be done by the doctor or this can be set up with the NDI account representative or service department. If the dental team is required to maintain the equipment but they have no understanding of how to do it, maintenance will NOT get done.

4 Clearly Assign Maintenance Tasks

Some offices hire cleaning crews to do certain maintenance items and have their team take care of others. Many offices request NDI to handle their more involved routine maintenance items. Others assign all equipment maintenance in house. In this case, these assignments need to be clear so there is no misunderstanding about who is supposed to do what. Assignments are best rotated on a quarterly basis so those doing the maintenance will learn how to perform all maintenance items. This will help when someone is out for sickness or maternity leave and the others have to fill in.

5 Schedule Maintenance Into Your Work Schedule

If your team is responsible for doing routine maintenance, it's important to find a way to put this into the responsible party's schedule. Team members generally don't mind doing maintenance if they know what to do and they are given the time to do it.

(...continued on page 40)

MIDWEST®

SKILLFUL HANDLING. POWERFUL DRIVE.

Introducing MIDWEST® E – The electric handpiece system that provides a necessary balance of power and control for all your high-speed, low-speed, and endodontic procedures

E Power—lightweight brushless motor and attachments designed for a range of applications

E Control—touchscreen user interface, small handpiece designed for easy maneuvering, and the ability to make a variety of adjustments on a single screen

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NEW MIDWEST® E Electric Handpiece System

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NDI Service Department

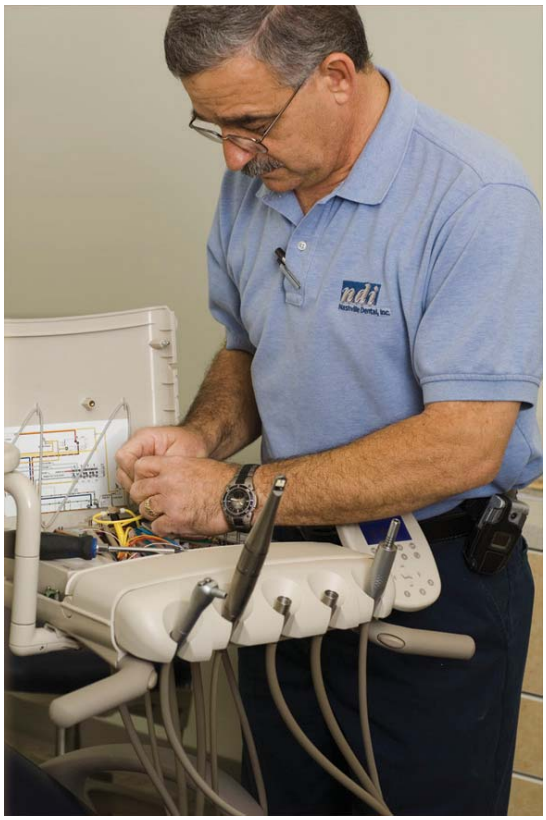
Equipment [Installation, Maintenance & Repair]

When your equipment is not working, you can't treat your patients. And when you can't treat your patients, you're not generating income. Nashville Dental's industry-leading service department is here to keep your practice up and running at all times so you never have a significant interruption in your income stream.

Technicians are located throughout our coverage area for the benefit of our customers and respond promptly.

Special rates and service times are available to our loyal VIP, VIP Gold and Partner customers. They also work with your NDI Account Rep to evaluate your current equipment and create a customized maintenance schedule for your office. Ask your account representative for details.

Call your NDI Service location for all your equipment maintenance and repair needs!



Service Center / Showroom Locations & Contact Info:

Nashville Dental, Inc.
Home Office

1229 Northgate Business Pkwy Madison, TN 37115
Customer Service: 800.251.2196
EZ-Fax Line: 800.263.4329

Jackson, TN Office
90 North Star Drive, Ste A
Jackson, TN 38305
Phone: 731.664.4600
Toll-Free: 800.562.8499
Fax: 731.664.7005

Knoxville, TN Office
10425 Cogdill Road, Ste 200
Knoxville, TN 37932
Phone: 865.675.5712
Toll-Free: 800.362.0737
Fax: 865.675.5714

Chattanooga, TN Office
4638 Resource Drive, Ste 104
Chattanooga, TN 37416
Phone: 423.894.5352
Toll-Free: 800.539.5352
Fax: 423.894.6192

Huntsville, AL Office
2315 Bob Wallace Ave, Ste D
Huntsville, AL 35805
Phone: 256.536.5566
Toll-Free: 800.362.0743
Fax: 256.536.0280

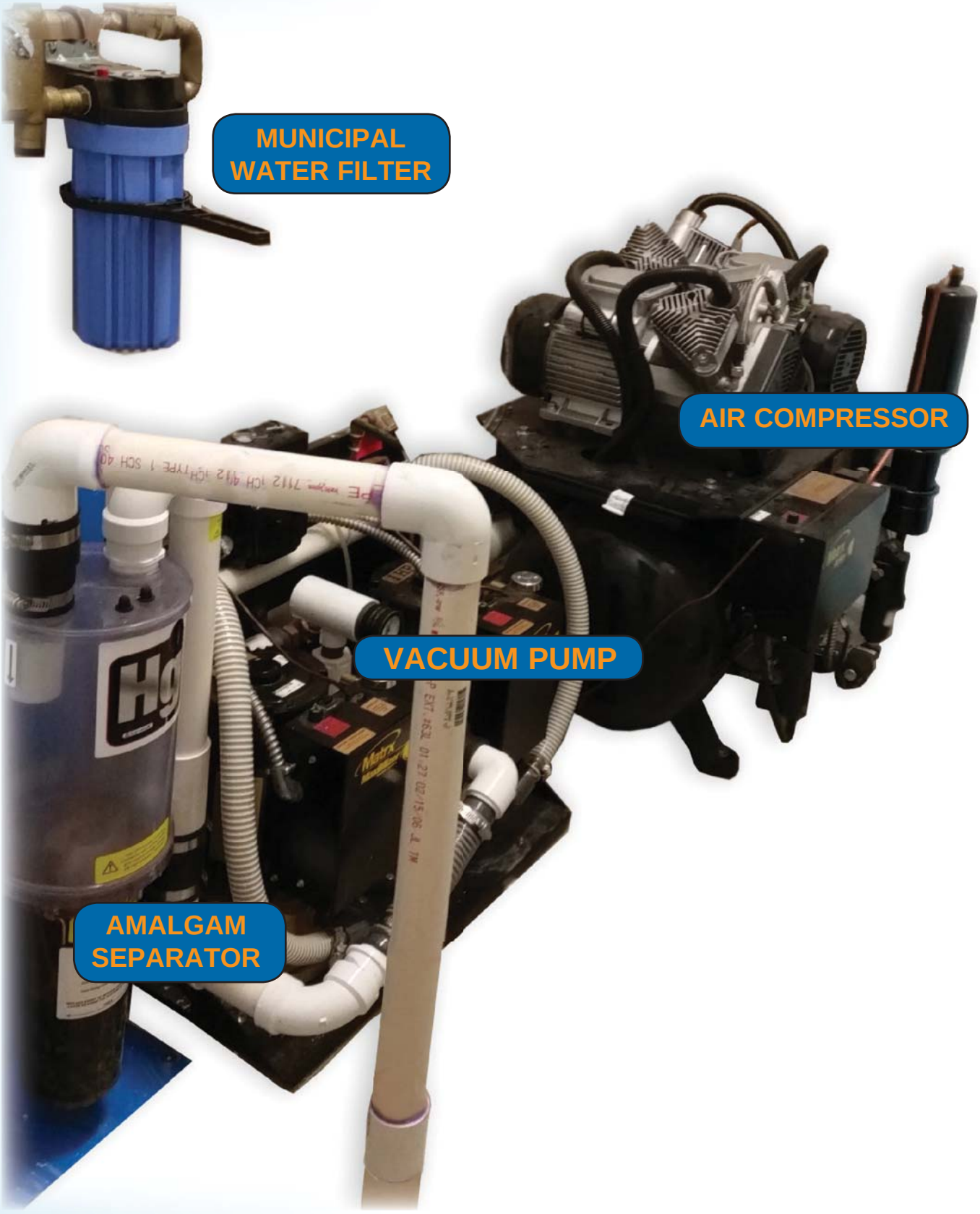
Louisville, KY Office
11003 Bluegrass Pkwy, Ste 530
Louisville, KY 40299
Phone: 502.266.9130
Toll-Free: 800.600.9130
Fax: 502.266.5543

Lexington, KY Office
2041 Creative Dr, Ste. C300
Lexington, KY 40505
Phone: 859.268.1019
Toll-Free: 866.268.1019
Fax: 866.268.1059

Huntington, WV Office
Camp Creek Plaza,
4388 5th Street Rd., Unit 6
Huntington, WV 25701
Phone: 304.522.0014
Toll-Free: 866.351.5001
Fax: 304.522.2443

The [Equipment] Room

There are 4 items located in your equipment room that require maintenance in order to enjoy a long, trouble-free life. These are the:

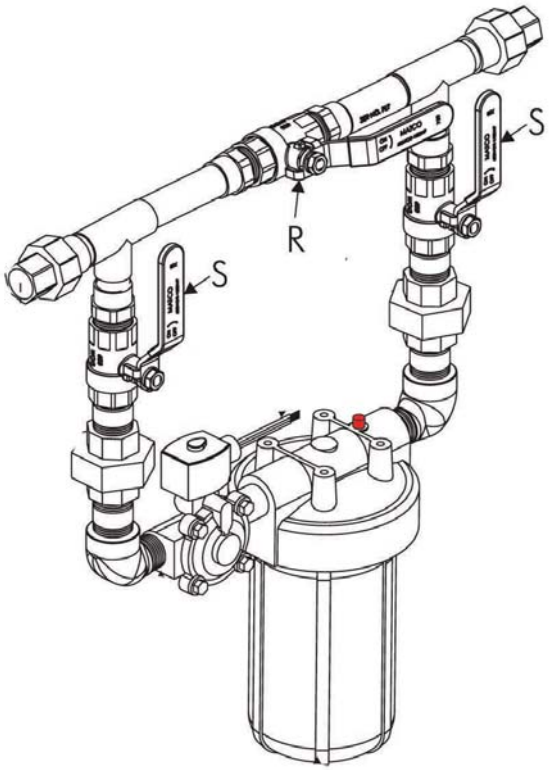


[REMOTE WATER CONTROL VALVE AND FILTER]
Maintenance

This piece of equipment serves two important purposes:

1. The water control valve has an electric solenoid that when power is cut to it, the valve closes preventing water from flowing to the rest of the office. The purpose for this is to prevent office floods. In the event any plumbing fitting were to fail while the office was unoccupied, the only water that could leak into the floor would be what is left in the lines. The water control valve would prevent water from continuing to flow preventing flooding and extreme damage and down time to the practice. This solenoid can be manually by-passed in the event of a power outage so that municipal water may still be used.

2. The water control filter prevents dirt, sediment and debris from municipal water supplies from making its way into the sensitive equipment items in the dental office. In many areas where construction is going on, the level of sediment in the city water lines can be heavy. This filter prevents sediment from working its way into your vacuum pump housing which can be the cause of premature failure and damage to the pump housing and impellers.



Water Control Valve Maintenance Required:

FILTER REPLACEMENT: The most common water by-pass filter system is the Air Techniques assembly. The filter element replacement reorder number is 53153. This should be replaced as needed. If you have a different system or model, ask your representative to help you find the appropriate part number for your replacement filter.

1. Close two valves (S), and press red button to release pressure.
2. Unscrew filter bowl, remove and replace filter. (have bucket or pan handy to catch water resident in loop).
3. Check gasket around rim of filter bowl. It's a good idea to lubricate this gasket with a silicone grease prior to reinstalling the filter bowl to insure the gasket does not stretch upon tightening. Reinstall filter bowl.
4. Open valves (S), check for leaks.
5. Press red button to relieve entrapped air.

53035 - Filter Element Replacement for 3/4" Valve - 2PACK - $71.82
53153 - Filter Element Replacement for 1" Valve - $91.00

53035

53153

[Amalgam Separators] Maintenance

The EPA and local waste water treatment facilities are beginning to promote the use of amalgam separators in dental office settings more and more.

If your county is requiring or requesting that you implement a system for capturing mercury from waste water, the SolmeteX systems are easy to maintain and can be added to any system.

SolmeteX - Hg5 Amalgam Separator

- Accommodates up to 10 operatories.
- Dimensions 29 ½"h x 10"w x 8"d.
- 1 1/2" inlet and outlet piping.
- Fernco couplers for easy install.
- Floor/wall mount brackets provided.

HG5-001 - $819.99*

Solmetex Hg5 Amalgam Separator for 1-10 Chairs.
*(*Price does NOT include installation. Installation is typically 2 hours labor.)*

HG5-002-CR - $352.39

Replacement Collection Container/Recycle Kit Complete

Sultan HealthCare - Purevac SC

Cost effective. Simple. Environmentally friendly.

- Separator Compatible Formulated specifically for systems with amalgam separators with a near neutral pH (9.4pH at concentrate) complies with EPA and SolmeteX® specs
- SolmeteX® certified The only evacuation cleaner recommended by SolmeteX®, the market leading Amalgam Separator manufacturer in North America!
- Super Cleaning Designed to remove a wide range of dental debris
- Scent of Citrus Leaves your system smelling great!
- Special Concentrate 1 oz (30ml) makes 1 quart (33.8oz) of solution
- Dispenses easily with 1 oz (30ml) pump (included)
- Non-Foaming & Biodegradable

21132 PUREVAC SC 2-Liter (67oz) Bottle (67 treatments).....$68.59

21135 PUREVAC SC 5-Liter (169 oz) Bottle (169 treatments)..... $149.49

Quala Triple Enzymatic Evacuation Cleaner

Non-foaming formula cleans evacuation systems and deodorizes as it cleans. Triple enzyme formula (Protease, Amylase, Lipase) dissolves organic fluids and debris to restore maximum performance to system and hoses. Neutral pH formula leaves a clean, fresh scent.

Features	Benefits
Economical concentrate	One ounce mixes with warm water to make 32 oz. solution
Environmentally friendly, neutral pH	Safe for use with amalgam separators
Easy dispensing	Solution squeezes easily into pre-measured reservoir
Safe to use everyday	Daily use improves cleaning efficiency

Q182605.....$22.99

SolmeteX®

Hg5® Series of Amalgam Separators

SolmeteX is Experienced, Equipped and Committed to assist the dental industry achieve environmentally sound and regulatory compliant practices.

SolmeteX provides the complete solution:
- ISO 11143 certified at greater than 99%
- Professionally engineered, robust, simple design.
- Easy to operate and maintenance free.
- Flexible design for hard-to-fit applications.
- Functional for wet or dry vacuum systems (install before pump on wet vacuum system, install before tank on dry vacuum system).

Hg5 Series is clear making it possible to visualize functionality. ("Black Box" systems hide any functional issues involving the system.)

Simple container change process includes:
- NO TOOLS, NO MESS
- PACKAGING FOR DELIVERY TO CERTIFIED RECYCLER
- ONLINE CERTIFICATE ISSUED FOR PRACTICE

What Solmetex does not require:
- NO Contracts with hidden fees
- NO Electricity
- NO Daily maintenance or decanting
- NO Pumps
- NO Timer
- NO Additional charges for shipping to recycling facility

EDITORS' CHOICE
THE DENTAL ADVISOR
+ + + + +

THE DENTAL ADVISOR
2014 PREFERRED PRODUCTS
+ + + + +

Product Awards

Dental Advisor recipient of:

Editors' Choice with a 5+ rating
2014 Preferred Product

Townie Choice Award best in category for Amalgam Separators eleven cosecutive years.

dental townie choice awards 2013

1.800.216.5505 www.solmetex.com

[Vacuum Pumps] Maintenance

There are two types of vacuum pumps: WET RING and DRY PUMPS

1. **Wet Ring Vacuum Pump –**
   This pump utilizes a water source and an impeller. This creates the vacuum in the lines. This is generally a very reliable system but it requires a little bit of routine maintenance. Follow the guidelines by the manufacturer to maximize life of your system.

2. **Dry Vacuum Pumps –**
   These pumps require no water. Dry vacs have very little maintenance but they still need to be maintained. The following page contains maintenance guidelines that will help you keep your vacuum pump running at an optimum level for many years.

Evacuation Cleaners & Accessories

Purevac™ - Sultan Healthcare
A non-foaming evacuation system cleaner, lemon-scented, liquid concentrate, biodegradable, and it dissolves bacteria-laden debris.
5 liters
21115 .....134.89
2 liters
21113 .....1 - 63.19 ...6 - 62.19

Quala Triple Enzymatic Evacuation Cleaner
Q182605.....22.99

Vac Attak™ - Premier
Unique organic bleach component. Biodegradable & Non-corrosive to metals. Non-foaming, safe for use with all pumps. Fresh lemon scent. 800gm jar. Provides 100 uses.
9011101 ..... 56.79

Quala Enzymatic Detergent Concentrate
Evacuation cleaner and instrument presoak. Fresh mint scent. Non-foaming. Gallon
18-555-NDC ... 1 -44.49 ...4 -42.39

Citrizyme Ultra Enzyme Cleaner - Pascal
A premium non-foaming formula. Fast acting dual enzymes remove protein and biofilms quickly. Leaves no residue. Powdered concentrate dissolves easily in warm tap water. Each 300 gm canister makes 35 gallons. 300/bx
15-250..... 41.79

Vacuum Shock Tablets - Palco
A maximum strength tablet designed for the initial cleaning and decontamination of the dental vacuum system. Breaks up and removes built-up accumulations from deep inside the lines. Releases a constant flow of a highly concentrated anti-microbial chemical agent and cleaner, quaternary ammonium. 6/jar
3546..... 33.79

Vacuum Clean Tablets - Palco
After shocking the system use vacuum clean tablets, a weekly time-released maintenance. The tablet will consistently disburse cleaning agents each time the low or high speed lines are in use. The contaminated fluids activate the tablet, effectively eliminating bacteria, bio-burden and blood build-up at the source. Replace tablet normally every 5 days depending on usage frequency. 45/jar
3547..... 36.49

Disposable Screen Traps

Disposable plastic Screen Traps for use with dental evacuation systems. Color Coded for easy identification. 25 per bag.

Q9030	2⅛" diameter	Blue	$8.99/bag of 25
Q9031	1¼" diameter	Mauve	$8.99/bag of 25
Q9032	1⅞" diameter	Green	$8.99/bag of 25
Q9033	2¼" diameter	Yellow	$14.69/bag of 25
Q9034	2⅝" diameter	Coral	$14.69/bag of 25
Q9035	2⅞" diameter	Beige	$14.69/bag of 25
Q9036	2¾" diameter	Gray	$14.69/bag of 25

Key Maintenance On Vacuum Pumps:

Daily: (All Vacs)

1. Clean Lines by running a quart of warm water through the lines beginning with furthest operatory from the vacuum. Most manufacturers recommend using a non-foaming enzymatic cleaner instead of just warm water, especially dry vac systems which use a separation tank. By using a non-foaming cleanser on a daily basis, the internal vacuum lines and the separation tank stay rinsed and cleaned. The separation tank contains sensors and controls that can fail if not rinsed and cleaned routinely. By running the appropriate cleaner through your lines each day, you can prevent the need to do a special, more involved rinsing of this tank at a later date. Check the user manual for your particular unit or ask your representative to look it up for you for more details.
2. Check the operatory solids collectors and change or clean as needed. This trap may be located by tracing your vacuum hoses to their connection point under the unit. There will be a round, or oval cap. When suction is turned off, this cap may be removed and the solids collector may be disposed of and replaced with a new one. We recommend the Pinnacle dispos-a-traps for this. They have sizes for most units manufactured.

Weekly (Wet Vacs Only):

1. Check Main Intake Filter at Vacuum Unit. Manually clean the filter and screen or replace with disposable Evac-u-traps by Pinnacle as needed.

Monthly:

1. (Wet Vacs Only): Change Main Intake Filter. We recommend using the Evac-u-traps by Pinnacle. Simply turn off vacuum. Unscrew existing trap. Take cap from new trap and place on old trap and dispose of. Screw on new trap.
2. (Wet and Dry Vacs) Dust and clean the vacuum motors to prevent heavy build up of dust and debris.
3. (Wet Vacs) Check and Change the Municipal Water Filter Routinely – Particulates and minerals from the city water source can get into the impeller housing and wear down the impellers causing premature failure.

Quarterly (Dry Vacs Only):

1. Check Vacuum Relief Valve Filter & Vac Control Air filter Depending on your particular Unit
2. Check Lubrication Level for Motors and contact your service department if lubricant is low. Some dry vacs require an oil change and others are completely sealed. Either type still needs to be checked on a routine basis. (Refer to your owner's manual or ask your NDI representative to help you determine what your unit requires.)

Annually:

1. Schedule an appointment with your NDI service department. They will check and replace the following as needed:
   a. (Wet Vac) Recycler Return Lines
   b. Vacuum Relief Filter

c. (Wet Vac) Clean Water Intake Filter
d. (Wet Vac) Clean Water Regulator Strainer
e. (Dry Vac) Change Drive Belt
f. (Dry Vac) Change Engine Oil as specified by your model.

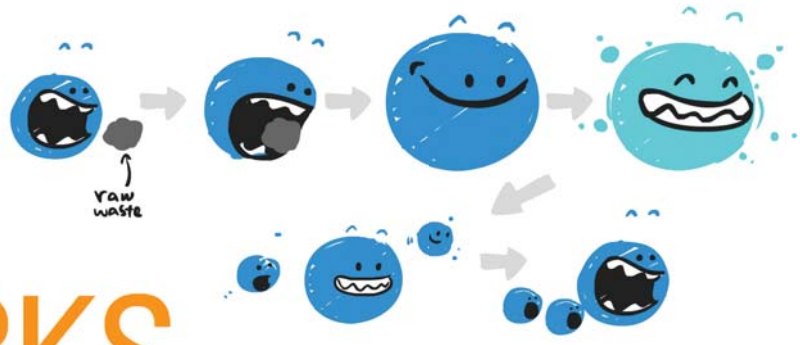
Evac-U-Trap® - Pinnacle
A totally disposable canister, lid, mesh filter and gasket designed to replace the present canister and filter in your central vacuum pump.

2-3/4" x 3-5/8", 12/bx, Fits: 1, 2 hp Dental-Ez single models, Apollo 1 hp, 1.5 single: tandem models, Air Techniques - Vacstar models. Ohmeda-Matrix all models. Turbine Industries, Techwest - Whirl Vac models, Vacudent - Workhorse single plus a number of other units.12/pk
2200..... 112.89

3-1/2" x 4-3/8", Fits Dental-Ez dual models made after 1978. Fits Dentsply made after 1991. 8/pk
2300..... 112.89

Fits Apollo 2 hp, 3 hp single and tandem models, Air Techniques - 1997 and later dual models, Vacudent - Workhorse dual. New finer mesh screen. 8/pk
2350-FS 112.89

[BIOPURE] SCIENCE THAT WORKS



Guaranteed suction is not just something that is nice to have. Guaranteed suction is something that every dental practice must have, according to the ADA.

Who wants to dig into the details of how a product works? For most of us, especially a busy dental practice, I suggest never! That is until you have a slogging down "pump" attack. We may talk preventative care, but in a busy practice, few have time to think about tomorrow's issues. The challenges of today are more than enough already!

Like with all old solutions that seem to work, recognizing the need for something new does not come easily. There is always that thing in our brain that is afraid to switch. We hope you will enjoy learning about microbiology. Guaranteed suction using an environmentally friendly alternative to chemical cleaners.

Introduction to Microbiology
The process by which complex organic compounds, in the presence of water and enzymes, are broken down or transformed into simpler compounds is known as digestion or hydrolysis. Put in layman's terms, to Soak and Eliminate.

Enzymes speed up the union of water with a substance, after which the substance breaks up into fragments. Enzymes are essentially organic catalysts that speed up and alter the rate of chemical reactions. This is done without the catalyst (enzyme) being altered or consumed in the process. Because the enzyme isn't actually consumed in the digestion process, small amounts go a long way.

Bio-Pure contains proprietary highly specialized, non-pathogenic strains of microbes selected for their ability to rapidly digest the organic nutrients broken down by the enzymes. These beneficial microorganisms include both aerobic (with oxygen) and anaerobic (without oxygen) varieties so that digestion will be assured under a variety of conditions and temperatures. Bio-Pure microbes are 100% all natural and safe for people, animals and plants.

How Does it Work?
When Bio-Pure is introduced into a waste stream the natural microbes immediately begin to break down the organic waste into bacteria/microbe sized bites. The bacteria/microbes digest these "bites" as described earlier giving them the energy they need to multiply into an active colony of millions of microbes.

The continuous growth, in effect, multiplies the digestive capacity of the microbial product. Unlike chemicals and enzymes which change the composition of organic waste and flush it away, microbes see the organic waste as food that they can eat to gain energy and reproduce.

Implications for Trap Hand Cleaning
Cleaning chair side traps is possibly the least favorite job in any dental office. In fact I wonder if there could be a worse job you could do before heading home to prepare dinner. Sadly for those of us who are lower on the office totem pole, for as long as patients are treated lying down, someone will have to maintain the evacuation system suction, which means that trap hand cleaning is here to stay.

The image to the right shows the difference between traps that have been flushed with chemicals and traps that are being soaked with the Bio-Pure formula developed by Dr Bernard, PhD Microbiology.

The unpleasant task of daily trap cleaning is done fourteen times less often.

"I came back two weeks later and took a picture of the same fitting and it had cleared 50%. Bio-Pure is not only a recommendation but a necessity in having a healthy vacuum system."
John Napier – Tech West Inc.

Implications for Evacuation System Suction
For most dental practices the process of flushing chemicals (including enzymes) down the lines has become a routine part of evacuation system maintenance. Bio-Pure may look like your regular "pac-men" microbes, but these microbes are quite different.

When Bio-Pure is introduced into a waste stream the natural microbes coat the lines. Each microbe will multiply to eight to nine million microbes overnight, essentially "soaking" the internal surfaces in millions of waste digesting microbes.

[BIOPURE] SCIENCE THAT WORKS

When Bio-Pure is introduced into a waste stream the natural microbes coat the lines. Each microbe will multiply to eight to nine million microbes overnight, essentially "soaking" the internal surfaces in millions of waste digesting microbes.

"Our lines are always running at full productivity. No more slogging down during the middle of a productive day." Ted C Kawulok D.D.S

Implications for Amalgam Separation
In the early 1990's Dr Ross Fraker (DDS, PhD) began his work with the city of Seattle to stop amalgam and other heavy metal waste generated by the dental industry from entering the municipal waste water treatment processes. For over 15 years Dr Fraker, President of R & D Services, Inc has applied his experience as an engineer and dentist to develop products that separate out this solid waste. Their product, The Amalgam Collector™, includes a reusable collection canister (no replacement filter cartridges) and is supplied with Bio-Pure as the recommended solution for the healthy maintenance of evacuation systems.

The State of Michigan is the 11th State to pass statewide legislation concerning wastewater discharge. Public Act 503 of 2008 (formerly HB 6307 of 2008) requires that on or before December 31, 2013, dentists shall install or have installed and use on each wastewater drain in the dentist's office that is used to discharge dental amalgam, a separator that has an efficiency level of 95% or greater as determined through testing in accordance with standards published by the international organization for standardization in ISO 11143.

Flushing with traditional chemical cleaners does not eliminate waste, it merely relocates the waste. Soaking with Bio-Pure eliminates all organic waste. If you are in a state or city that has legislated amalgam separation, or are a dental office that has voluntarily implemented an amalgam separator Bio-Pure will minimize the need for replacement filter cartridges, or reduce the amount of potentially toxic waste to dispose of. UCLA (quoted below) found they could save an additional $1,500.00 per month on replacement filter cartridges.

"I would recommend Bio-Pure to any practice that wants an effective "all natural" product that saves money on evacuation system expense"
Rochelle Bache - UCLA Faculty Group Dental Practice.

Implications for Equipment Maintenance
Hot on the heels of Amalgam Separation Legislation is additional legislation addressing the amount of clean water being consumed by the dental industry. A wet-vacuum system consumes up to forty gallons of water per hour for each operatory. In cities and states where there is abundant water supply the only issue in using this amount of water to is the cost of the water, and an environmental conscience. In other locations like California, where water supply is limited, legislation has been passed that requires the replacement of wet-vacuum pumps with more costly dry-vacuum systems.

Unlike wet-vacuum systems where the suction created by passing water through an impeller has plenty of tolerance, air based systems are sensitive and will not tolerate chemical foam entering the system. The problem is that all chemicals foam to some degree when agitated. Microbes do not foam. If you are fortunate the foam from a chemical cleaner will trigger a sensor, and shut down your suction system. The loss of patient time will be minor, compared to the cost of the chemical foam reaching the impellors and corroding them.

"Once in a while a product comes along that revolutionizes an industry." Tim Yaeger – Yaeger Dental Repair

Affordable, Easy to Use - Saves Time & Money:
Using modern bio-science or microbiology to soak away waste does not require large up-front costs. Office staff use the same procedure as in daily chemical flushing, except that they now do a bi-weekly soak with Bio-Pure. The Bio-Pure product does cost less per week ($1.75 per operatory per week) than a traditional chemical cleaners. But it is the guaranteed improved suction, elimination of trap hand cleaning, reducing amalgam waste and being environmentally responsible that makes this micro biological solution so appealing.

2801002	Bio-Pure Evac Cleaner 14oz	$87.09
2801102	Bio-Pure Evac R&M 14oz Kit	$154.49
2801004	Bio-Pure Evac Sys Dispenser	$29.09

Schedule A Evacuation Maintenance Call with NDI Service Department – Get 20% off the Introductory Kit.

[COMPRESSORS] Maintenance

There are two types of compressors:

1. <u>Lubricated Compressors:</u> These compressors use lubricated motors which are much quieter when running. However, over time, oil particles can work their way into the air line and may contaminate the air which can lead to clinical bonding issues. Most lubed compressors are equipped with pure-air coalescent filters that when maintained, will eliminate this concern.

2. <u>Lube Free or Oiless Compressors:</u> These compressors don't require oil lubrication. This eliminates the chance of contamination as well as the need to routinely check and change oil. They are typically louder when running yet require less maintenance. Compressors in general require little maintenance, but maintenance is still required.

Key Maintenance On Dental Compressors:

Weekly:

1. Check Oil Level (Lubricated Compressors Only) **(A)**
2. Check Moisture Indicator on Drying System (If pink or white, purge tank) **(B)**
3. Empty Condensation Drain Canister (if equipped.)**(C)**

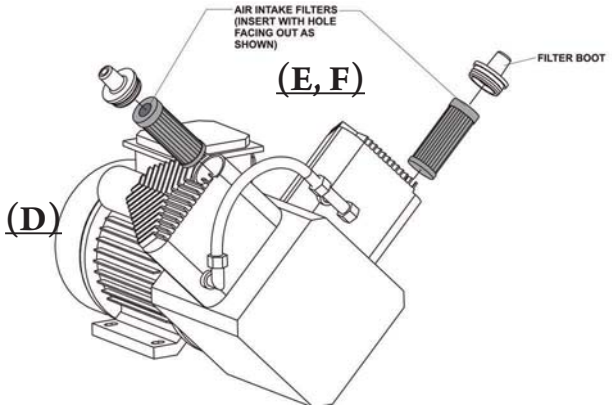
Monthly:

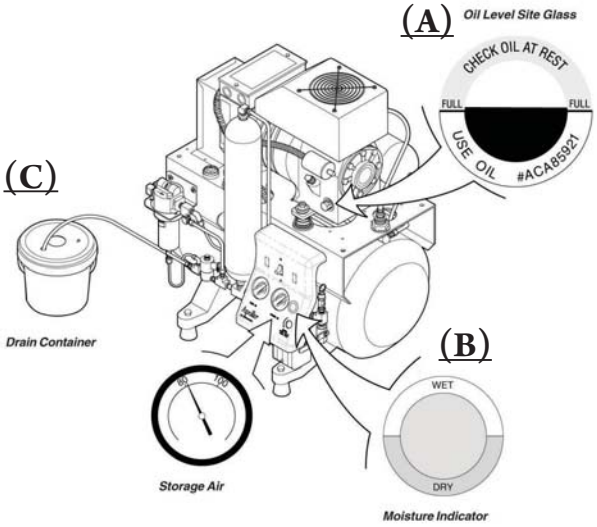
1. Clean and dust off compressor motors **(D)**
2. Check Air Intake Filters (if your equipment room is subject to a dusty environment, you may need to change these filters more often than once a year.) **(E)**

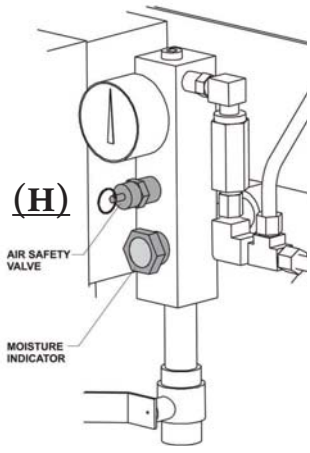
Annually (We recommend an annual service call to perform the following annual maintenance items.)

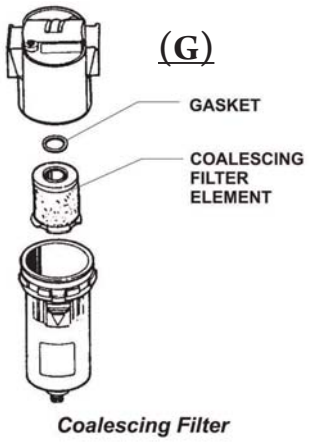
1. Replace Air Intake Filters **(F)**
2. Replace Ultra Air Coalescing Filter **(G)**
3. Change Oil (Lubricated Compressors Only)
4. Test Pressure Relief Valve**(H)**

Note: The following images are generic images and may not match your particular unit. Regardless of unit brand, these maintenance items are fairly universal. To assure that your compressor is maintained with the correct parts, it is best to set up an annual maintenance call with your local Nashville Dental service department.









[Sterilization Room] Maintenance

Sterilization room equipment is critical to the office's ability to process instruments. If the autoclave shuts down, instrument flow stops, potentially shutting down production. This can be extremely costly to the office. In the sterilization area, there are two common items that need routine maintenance:

Autoclaves:

Autoclaves vary in their required maintenance due to design and type. It is important to check your owners manual to see what the recommended maintenance is for your unit. Following are some generic guides to consider and implement in your maintenance plan.

Weekly:

1. (Autoclaves that reuse their water.) Drain water reservoir and allow to stay dry over the weekend. Refill with fresh water on Monday.
2. Wipe inside of autoclave chamber and racks with soft cloth.
3. (Cassette autoclaves - Statim) Clean inside cas sette, seal and wipe down with Stat-dry or Jet-Dry.

Monthly:

1. Clean autoclave using manufacturer's instructions.
2. Check door gasket or cassette gasket.
3. Clean chamber filter or screen.

Semi-Annually:

1. Replace Door Gaskets
2. (Cassette autoclaves - Statim) Check and clean cassette gaskets and lube. Gasket may be lubed with liquid soap.
3. Check filters if your unit has filters and replace as needed.

Annually:

1. Replace Gaskets
2. Replace Filters (check your manual for specifics on if you use a filter.)

Instrument Washers/Cleaners:

Daily:

Check and clean pump filter as necessary. The pump filter prevents foreign objects from getting into the pump and causing problems. If burs, syringe tips, files, etc. get put into the instrument washer accidentally, these objects can become lodged in this filter. Clean these out promptly to prevent them working their way into the pump assembly.

Ultrasonic cleaners - check drain screen and remove any loose burs, files or large particles.

Quarterly:

Clean spray arms. Over time, mineral deposits or debris can become lodged in the holes of the spray arms preventing thorough washing. Spray arms are easily removed. Once removed, use a sharp skinny object to push any debris from the holes and then rinse under running water.

Annually:

For Hydrim Users - the detergent metered dosage tube should be replaced annually. This will prevent too much detergent being used in each cycle. This should be done by your Nashville Dental service technician.

[Handpiece] Maintenance

Handpieces are used repetitively and are required to do a lot of work. The cost of the handpiece is primarily in the technology of the **turbine**. When a handpiece goes down, it's the turbine in most cases that needs to be replaced. When planning a maintenance budget, figure in the price of turbines for each handpiece every 14 - 24 months depending on the brand used and the method of maintenance.

While cleaning and sterilizing handpieces, there is a great risk of improper handling, especially in fast paced offices. It is important to have enough handpieces in circulation so that you always have sterile, room temperature handpieces on hand. If you have to take a hot handpiece directly from the autoclave to use, this can cause premature turbine wear and failure. A good rule of thumb is to have 3 handpieces per doctor's operatory.

The following is a generic guide to maintaining handpieces. Always check your user manual for specific instructions on your brand of handpiece.

After Each Use:

1 Clean the handpiece.
This may be done under running water with soap and a soft brush or sponge. Do not submerge the handpiece in a bath or ultrasonic cleaning solution. Also avoid letting water run directly into the drive air tubes. Hold the handpiece with the back end down. It is important to remove any cements, saliva or blood from the body prior to autoclaving. If you don't, this material will become baked on and make the handpieces look dirty.

2 Dry
Dry the handpiece with a towel prior to lubricating. Shake excess water off of the handpiece. You don't want excess water in the drive air tube when lubing.

3 Lubricate
Most handpieces have a lubricant that is recommended by the manufacturer. It is always good to use the suggested lubricant. As a rule of thumb, you want a synthetic, clean, high-heat lubricant. *(Some excellent products to use are - KaVo Spray by KaVo America, Midwest Plus Lubricant by Dentsply Midwest, Phase Change by Western Phase Change Corp. and Bio Lube by Southland Dist.)* Place two to three drops of lubricant or if using an aerosol can, a 1 second blast into the drive air tube on the back of the handpiece. (This is always the smaller of the two largest holes on the back of a handpiece.) For handpieces that use a swivel, quick connect, you will need to use this to add lube unless you have an aerosol can with the appropriate nozzle for your brand of handpiece.

4 Purge
After placing oil in the drive air tube, you need to run the handpiece for 15-30 seconds so the lube reaches the bearings and the excess is blown out.

5 Wipe down
Wipe excess lubricant from outside of handpiece body prior to sterilizing.

6 Sterilize
Bag handpiece in CDC approved sterilization pouch and autoclave according to manufacturer's instructions.

7 Store handpiece for use
- Remove handpiece from sterilizer and store for use with head in the up position so that any moisture in the drive air tube can drain.
- Always allow the handpiece to return to room termperture before running.
- Never run handpiece under cool water to cool it enough for use. This can warp the turbine components and cause turbine failure.

In recent years, automated handpiece maintenance units have been introduced that eliminate steps 3, 4, and 5. In studies, these steps were shown to be the ones that were very inconsistent from staff member to staff member. These automated systems deliver the exact amount of lubricant to the right part of the handpiece and then run the handpiece to purge excess lube. The Assistina, by W&H, also delivers cleaner to the coolant water and air tubes to prevent deposits from building up in these lines.

Note: ***Handpieces are federally regulated medical devices. When turbines need to be changed, it is HIGHLY RECOMMENDED to use original manufacturer parts and NOT after-market turbines. A KaVo handpiece with an after-market turbine is NO LONGER a KaVo handpiece.***

Lowspeeds and Electrics: ***These motors and attachments need to be maintained exactly as the manufacturer's describe. We highly recommend one of the automated systems for maintaining your electric and lowspeed attachments.***

The **TURBINE** is the **HIGHEST TECHNOLOGY** item in your handpiece and is designed and balanced to **PRECISELY MATCH** the handpiece body.

300,000 RPM's

6,600 RPM's

10,000 RPM's

16,000 RPM's

Your handpiece **TURBINE RUNS AT HIGHER RPM'S** than any other mechanical engine or device.

The **CLEARANCE** between a handpiece turbine and the handpiece body is **LESS THAN A HUMAN HAIR**.

Using **ORIGINAL MANUFACTURER REPLACEMENT TURBINES** and a **LUBRICANT** that is **ALSO A CLEANER** will **IMPROVE THE LIFE** of your turbines lowering your maintenance overhead.

DEBRIS BUILDUP in the turbine housing can dramatically **REDUCE THE LIFE** of your turbine.

Consider investing in a **MAINTENANCE SYSTEM** from one of these companies to protect your investments.

The Assistina - by A-dec W&H, the Quattrocare - by KaVo and the Automate - by Dentsply, are the best selling units. See your account representative for a demo or for more details on these units. Many offices have dramatically increased the life of their handpiece turbines by using these units. Not only do they decrease turbine failures, they decrease down time as well - making the office more productive.

[Handpiece] Maintenance

KaVo QUATTROcare Plus System

More than 70% of all handpiece failures are due to insufficient maintenance!

The QUATTROcare Plus Dental Handpiece Maintenance System provides:

- Consistent and extremely efficient dental maintenance of up to four handpieces on one cycle - with the push of a button
- Enormous time, and therefore cost, savings for your dental office
- Protection of your valuable handpiece investment
- New chuck care feature

Easy

- Automatic cleaning, purging and lubrication
- Simple maintenance with just the push of a button
- Can be used for virtually all manufacturers' handpieces, air driven scalers and air motors

Clean: Don't lubricate the debris in your handpieces!

- The KaVo QUATTROcare Plus will ensure proper cleaning and removal of debris.

- The secret: QUATTROcare Plus cleaning and lubrication
  spray solution expands inside the instrument, creating an extremely efficient physical and chemical cleaning. The expanding QUATTROcare Plus spray is proven to reach and clean every area of the handpiece than needs cleaning.

- Completely automatic, QUATTROcare Plus significantly reduces the time consuming aspects of maintenance and protects your handpiece investment from routine sterilization and use.

1008.3805 . . . . . **$2,869.99**

Dentsply Midwest Automate Handpiece Maintenance Station

The Midwest Automate system enhances efficiency and complements the way you work by effectively removing debris to promote lasting handpiece turbine life, reducing downtime to keep your staff moving and creating less mess than traditional handpiece maintenance for quick cleanup.

Midwest® Automate™, the intuitively designed, 4-port automated handpiece maintenance system offers:

- Precise and consistent cleaning, lubricating, and expelling for increased efficiency
- Unmatched ease of use and less mess
- Flexibility for use with a wide range of handpieces
- Durable construction backed by a 3 year warranty

Debris is reported to be one of the key causes of turbine failure. The Midwest Automate is effective at removing debris from the handpiece.

Research States:

- 2 of 3 Dentists state handpiece turbines last longer since using an automated handpiece maintenance system
- 3 of 4 Dentists state it takes less time to maintain handpieces
- 3 of 5 Dentists state the machine is essential in their practice
- 4 of 5 Dentists state it meets expectations - turbines last longer, less time to maintain handpieces and simplifies the process

380200 . . . . . **$2,599.00**

KaVo Spray - Kavo

For sterilization maintenance of all KaVo high speed handpieces, low speed motors, heads, attachments. Nozzles sold separately. H

500ml Can
0411.9660 . . . . . **60.59**

MULTIflex Nozzle
0411.9921 . . . . . **20.49**

Quick Nozzle: For all INTRA and INTRA LUX heads, 4-hole high speed handpieces, 181 and 182 air motors and attachments.
0411.9931 . . . . . **13.59**

Midwest Plus™ Handpiece Maintenance System - Midwest

Heat tolerant formulation allows all maintenance to be performed before sterilization. Can be used on all Midwest high-speed, low-speed handpieces and attachments.

Midwest Plus™ Aerosol Spray - Cleaner/Lubricant in a convenient aerosol spray (nozzle sold separately),
NOTE: For use with new Midwest XGT and Stylus Handpieces, (Hazardous Shipping Charge on this item.)
380080. . . . . . **58.99**

Nozzle for Midwest Plus Aerosol Spray
380085. . . . . . **16.99**

Plus Traditional Maintenance Kit
Contains: 2oz Lubricant and 8oz Cleaner
380145. . . . . . **72.99**

Plus HP Lube 2oz
380130. . . . . . **44.99**

Plus HP Cleaner 8oz
380140. . . . . . **37.99**

Plus HP Cleaner, 1 liter
380141. . . . . . **98.99**

Assistina 301 Plus

Standard Product Features
- Air pressure operation
- 2 universal adapter couplings
- Cycle time - about 35 seconds
- Quick disconnect for easy use with A-dec/W&H adapters (other products require their own adapters)
- Cleaning liquid, 1 liter (good for approximately 5000 cycles)
- Service oil, .5 liter (good for approximately 5000 cycles)
- Low operating cost
- One Year Warranty

Kit
00030135. . . . . . **2,339.00**

A-dec/W&H Synea LW RotoQuick Adapter
03104500. . . . . . **195.00**

Service Oil, .5 Liter Refill
02675930. . . . . . **119.49**

Cleaning Liquid, 1 Liter Refill
02680230. . . . . . **195.00**

AC-20 Motor, Toplight Highspeed Adapter
02690400. . . . . . **195.00**

Midwest Quick Connect High Speed Adapter
03101900. . . . . . **195.00**

Midwest Low Speed Attachment Adapter
03103500. . . . . . **155.00**

Kavo Low Speed Head Adapter
02679000. . . . . . **99.00**

Star High Speed Adapter
261547. . . . . . **159.00**

Kavo High Speed Adapter
0411.7991 . . . . . **92.71**

MIDWEST®

Carbide & Diamond Rotary Instruments

Operative Carbide Burs
Trimming and Finishing Carbide Burs
Surgical Carbide Burs
Esthetic Finishing Carbide Burs
MultiPrep™ Premium Carbide Burs
Midwest Diamonds
Midwest ONCE® Sterile, Single-Patient Use Diamond Rotary Instruments

- Extensive selection of shapes and sizes in familiar configurations to meet your clinical needs.
- **Midwest** guarantees the quality of its burs and diamonds 100%!
- Convenient packaging options.

Special Offer!

Buy 4 Midwest® Carbide bur packs, Get 1 of the same pack size FREE! (Promo Code MNP15001)

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[Dental Operatory] Maintenance

Items To Consider In Operatory Maintenance:

Within the operatory, there are common problems that routinely pop up resulting in a service call: air/water syringes leaking and buttons sticking, vacuum valves that get tight and seem to lose their vacuum power, tubings and upholstery get dry, hard, cracked and stained. These all lead to air and vacuum leaks, water clogs in syringe tips, handpieces and control blocks, as well as a dirty looking operatory environment. In addition, syringe and handpiece water gets musty smelling like a wet basement. These common issues can be drastically reduced by understanding the causes and utilizing a little routine maintenance.

Air/Water Syringe Common Issues:

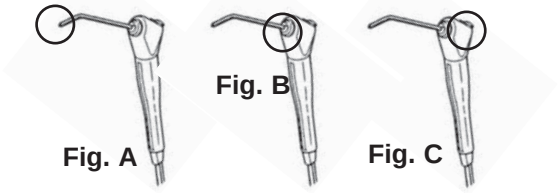
1. Leaking out of end of the tip or around the button: (Figure A & C)This is caused by the buttons sticking and not sealing correctly.

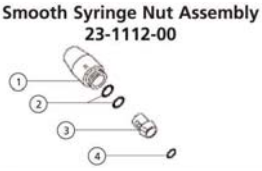
Common reasons this happens:

A. Minerals in hard water can create mineral deposits around the o-rings in the syringe buttons causing them to stick and not seal properly.

B. Bio-burden debris build-up from utilizing syringes without a barrier over them. As the doctor, hygienist or assistant works in the oral environment, saliva, blood and mucous get on the gloves. Then when using the syringe, this material can work into the o-rings in the buttons. This can lead to o-ring failure and a less than desirable situation for the patient.

C. Disinfectant build-up. At the end of each procedure, most offices spray and wipe the syringe with a disinfectant liquid. This also works its way into the buttons and leaves an increasing layer of debris that can cause the o-rings to become stiff and not seal correctly.





New Button Kit

[Assistant's Instrumentation] Maintenance

2. Water leaking and dripping from around the nut or tip retainer. (Figure B)

A. O-ring is torn and needs replacing. There is a small o-ring at the back end of this nut that the tip slides in and out of all day. Through repeated use, this o-ring can become torn and needs replacing. These o-rings can be purchased in a 10-pack and should be available for replacement whenever this situation occurs.

To prevent these problems:

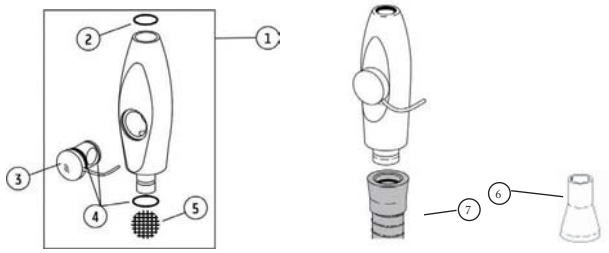
1. Air/water syringes should be covered with a barrier during use. While this can be difficult to get used to, it is the only way to prevent bio-burden from working into the buttons.
2. Syringes should be wiped down thoroughly with a disinfectant between patients.
3. Weekly - syringes should be wiped down with a mild soapy water solution and lubed with a silicone lubricant. (See general operatory surface cleaning guidelines on page 13.)
4. Spare parts for syringes should be kept in a maintenance kit in the office.
   A. O-rings for tip retainer nut.
   B. Spare button kits for your brand of syringe.
   C. Silicone lubricant.

Vacuum Valves – HVE and Saliva Ejector Common Problems:

1. Valves tight and hard to open and close.
2. Suction is low or weak

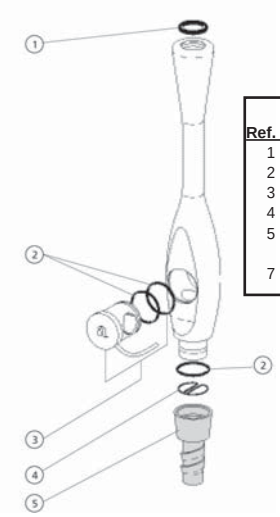
To prevent these problems:

1. Most HVE valves have QD connections allowing them to be removed and ultrasonically cleaned routinely. Lack of regular cleaning and lubrication will allow debris to work into the rotor and damage it so that it can't be lubed enough to return to a like new condition.
2. Keep extra o-rings on hand and replace them semi-annually to keep the valve operating smoothly. Always lubricate the o-rings with silicone lubricant prior to reassembling the valve.
3. Build-up in lines can lead to weak suction. As the suction is used, lines can develop a crust on the inside walls that make the lines smaller. This can cause large debris to hang up and create clogs. Lines should at a minimum have a quart of warm water run through them each day. Then weekly, run a quart of non-foaming cleanser through each operatory. To do this, utilize a non-foaming enzymatic solution mixed in an atomizer jug that is designed specifically for vacuum line cleaning. These jugs allow air to mix with the solution creating a scrubbing effect in the lines. The Vacusol Ultra atomizer allows the assistant to hook up the lines and walk away. A metered dose of exactly a quart will be pulled into the lines. One mixture will do 3 rooms. If you do not have an atomizer, make sure that you do not pull straight liquid through the lines as it will not clean the lines well and can cause problems with your vacuum. Always allow air to enter with the cleaner.
4. The solids collector on the unit should be checked weekly and cleaned or replaced as necessary. The main trap at the actual vacuum pump needs to be checked regularly. When running cleaner through your lines, large amounts of debris can break loose and fill this trap causing the suction to shut down. By keeping the disposable Evac-u-traps on hand, you will always have extra clean traps to swap out quickly in this situation.



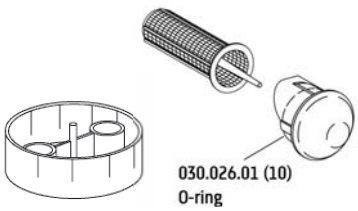
A-dec S/E Valve Parts List

Ref. #	Description	Part #
1	S/E valve Complete (Autoclavable)	12.1258.00
2	O-ring - S/E tip holder	034.107.01
3	S/E Rotor Cartridge w/ o-rings	12.1093.00
4	O-ring - for S/E Rotor	034.012.01
5	S/E Screen (10 pack)	11.1235.01
6	Tip Holder *(for earlier versions)* S/E Black	12.0183.00
	Tip Holder *(for earlier versions)* S/E Gray	12.0183.01
7	S/E Tailpiece Autoclavable	12.1088.00



A-dec HVE Valve Parts List

Ref. #	Description	Part #
1	O-ring - HVE Tip Holder	034.013.01
2	O-ring - HVE Rotor	034.014.01
3	HVE, Autocl Rotor w/ O-rings	11.1074.00
4	Screen, Spring Clip for QD HVE	11.0998.00
5	Tailpiece, QD, Short Surf color	11.1027.00
	Tailpiece, QD, Short Grey color	11.0989.00
7	HVE Valve long, Autocl complete	11.1178.00



[Dental Operatory] Maintenance

Handpiece Controls & Operatory Surfaces

Within the operatory the need for disinfection is critical. With handpiece aerosols, saliva, blood and other infectious debris accumulating on instruments and surfaces, thorough cleaning and disinfecting is essential to prevent the spread of germs and disease to staff as well as other patients.

There are several chemicals that are used for disinfecting dental equipment. Dental equipment manufacturers take this into account when choosing materials used in the manufacturing of their equipment items. However, to date, there has not been a material discovered that will stand up to all chemicals; and all surfaces exposed to disinfecting chemicals need to be thoroughly and regularly cleaned. For this reason, you will find in most user manuals of major equipment manufacturers the recommendation of barrier protection as their only approved means of eliminating cross contamination on touch and transfer surfaces. That is why it is important to consult your user manual for the equipment items you purchase and find materials that meet the manufacturer's guidelines.

In the day to day world of dental offices however, disinfectants are used regularly on these surfaces. In order for disinfectants to work, they must be in contact with the surface when it is clean. Therefore, most disinfectants serve as a cleaner and disinfectant. In order to have a clean surface, however, the dirty surface should be sprayed and then wiped clean. Then a layer of disinfectant is sprayed on the clean surface and allowed to air dry. The residue left behind stays in contact with any left behind germs and if contact is maintained for the required time as specified by the manufacturer, germs will be killed. This spray - wipe - spray technique is recommended by CDC. This residual layer of disinfectant will continue to build up over time and needs to be cleaned off. If not, this residue will dry vinyl and plastic surfaces and cause them to stain and crack.

Nashville Dental cannot give you advice contrary to what our manufacturing partners recommend; so, we DO NOT recommend use of disinfectants on surfaces that can be barrier protected. However, since so many offices feel the need to disinfect these surfaces, in this section we will discuss the different surfaces and how to best clean and maintain them so that they don't prematurely wear and become irreparably stained and damaged.

Chair & Stool Upholstery:

Upholstery is designed for esthetics, comfort and durability. However, upholstery that is not maintained will soon become stained, dry and begin to crack. This can be avoided by following a regular routine for maintaining this surface.

NOTE: Chair upholstery is not considered, by the CDC guidelines, to be a cross contamination surface. Therefore, disinfection is only necessary when the upholstery becomes visibly soiled.

Many offices routinely disinfect this surface between patients. This exposes the material to these harsh compounds over and over again. If the office feels this is necessary, it is important to use a disinfectant with very low alcohol content and to avoid phenols. A few that are the gentlest on chair upholstery seem to be, Birex by Biotrol, Optim 33 by SciCan, ProSpray by Certol. There are others, but these have performed well. However, they ARE NOT recommended by the equipment manufacturers.

If you are disinfecting your chairs, you need to clean them at least weekly. This will remove the disinfectant residue and help to prevent staining, drying and cracking. Palco manufactures a product for cleaning and conditioning chairs called TopCat Vinyl Maintenance Kit. The kit comes with a stain remover, cleaner and conditioner and a caddy for keeping the cleaners organized.

Touch & Transfer Surfaces

Lights, Tubings, X-rays, Countertops, Handpiece Controls, etc.:

Many of these surfaces may be barrier protected. However, many offices disinfect these surfaces even if they have been covered during procedures. Just like the chairs, the materials used in manufacturing many of these surfaces are durable high quality polymers designed to stand up to the harsh operatory environment. However, if these are not cleaned properly and routinely, they too will become stained, hard, dry and cracked.

Protocol for disinfecting these areas:

1. When cleaning and wiping tubings, hold the tubing with the end hanging down, then wipe down toward the end. This will help to eliminate tubings being pulled away from their connectors.
2. Wipe surfaces clean with a saturated 4x4 or towelette, then wipe again with a fresh saturated towelette.
3. Spraying control heads and areas with air and electric switches can lead to switch malfunctions. If possible, spray a 4x4 or towelette first and then wipe down these areas.
4. Weekly clean these areas to remove the disinfectant residue.

General Operatory Surface Cleaning:

Because these surfaces repeatedly are layered with disinfecting residue, it is important to routinely clean this residue off.

Daily:

1. Mix a solution of warm water & a mild dish detergent like Palmolive or Joy Liquid in a bucket.
2. Dampen a sponge or cloth with the soapy solution and thoroughly wipe down all surfaces that have been disinfected throughout the week. This includes, chair surfaces, countertops, light handles, handpiece hangers and tubings. *(Note: Turn off units using fiber optics so the bulbs are not on while wiping down these tubings.)*
3. Use another cloth or sponge dampened with warm water to remove the residual soapy solution.
4. Dry.

Weekly:

1. Some manufacturers (e.g. Pelton & Crane) recommend using a household furniture wax like lemon Pledge, to restore the luster to your upholstery. (Note: Not all manufacturers recommend this. Refer to your user manual for details.)
2. Use a vinyl conditioner like the Topcat product listed above.

3545 Topcat Vinyl Mntc Kit $49.89

HIGH QUALITY H_2O [MAINTAINING YOUR DENTAL UNIT WATERLINES]

In the early 1990's the ADA and CDC determined that the nature of dental units and their vinyl tubings allowed the growth of bacteria in the form of "biofilm" attaching itself to the internal walls of flexible waterlines like plaque in an artery. The bacteria in this biofilm are referred to by the ADA and CDC as CFU's or Colony Forming Units. Studies have shown that a brand new dental unit can develop large quantities of CFU's, well above the minimum recommended levels of 500cfu/ml, within 9 days of initial use. This has nothing to do with poor quality water in the city supply. It is tied to the nature of the flexible tubes and their small diameter that contribute to this issue.

Not to worry! There is a protocol for getting back to High Quality H2O.

1. POINT OF ENTRY

First, you must have an entry point into your water supply whereby you can introduce a chemical to clean the internal lines. The best solution for this is to install a clean water bottle system "CWS" on your unit to supply both your handpieces, cavitrons and air/water syringes. If you do not use a clean water bottle delivery system, you may also install a DentaPure Water Treatment Cartridge inside your Junction box where your water is hooked up to your unit. This will provide water quality treatment for up to 12 months.

8182 DCI Asepsis Deluxe Dual Bottle Clean Water System *(price does not include installation)* **$224.13**

DP365M 1 Year Cartridge for municipal water system The 365M will reliably treat 240 liters of water; one year's service in most cases. **$219.99**

2. TEST

If you want to test your water, you can purchase an in office test kit to determine if your water has high levels of CFU's.

80401 Confirm Waterline 4-Test Kit **$130.89**

3. SHOCK/STERILIZE

Shock and sterilize the internal walls of the waterlines with a chemical that will kill the bacteria and clean the biofilm from the walls of the lines.

a. Make sure you have a clean water system installed at each source of water.

b. Place Sterilex Ultra or Monarch Waterline Cleaner in the bottle of the clean water system as instructed by the manufacturer of the cleaning material.

c. Place the bottle on the system and flush handpiece tubings, syringes, cavitrons (all without tips or handpieces installed) until the solution is coming out the working end.

d. Allow the solution to sit in the line overnight or over the weekend.

e. The next morning, place plain tap water or distilled water into the bottle and thoroughly flush all lines without tips or handpieces installed. Continue to flush until clear clean water is all that comes from the line. It's ideal to run the water into a white or clear cup so you can monitor the debris that comes from the lines.

f. Repeat the Line Sterilization process weekly. If you are using waterline maintenance tablets, like the A-dec ICX tablets, then you only need to repeat the sterilization process every 2-3 months.

513P Sterilex Ultra Powder Pak (20) **$71.39**

H6340 Monarch Waterline Cleanerx 16oz/btl **$14.99 10-$13.99**

4. MAINTAIN WATER QUALITY:

Immediately after sterilizing the lines, begin using a product for maintaining the water lines. You have two main options:

Option 1. Use an in-line chemical treatment like DentaPure. DentaPure provides a 2 month or 12 month treatment cartridge that can replace the bottle's pick up straw and continuously cleans the water with no need to shock the system. No pills to mix, no cfu testing required. Simply install the B Series on clean dental unit small lines and the water will meet or exceed all ADA/CDC standards.

No need to use distilled water. Tap water is recommended.

DP40	2 Month Cartridge for bottle system The DP40 will relably treat 40 liters; two month's service, ideal for limited use applications.	**$91.99**
DP365B	1 Year Cartridge for bottle system The 365B will reliably treat 240 liters of water; one year's service in most cases.	**$219.99**
TEST	DentaPure Test Strips for testing water	**$21.99**

Option 2. Water treatment tablets. Simply put a tablet in the bottle each time you refill using an A-dec ICX tablet or

Blutab tablet in each water bottle at each fill up.

90.1064.00	ICX Waterline Maintenance Tablet .7 liter	**$41.49**
90.1065.00	ICX Waterline Maintenance Tablet 2 liter	**$62.99**
BT50	Confirm Blutab 750ml (50 tblts)	**$34.59**

FOR OPTIMUM MAINTENANCE

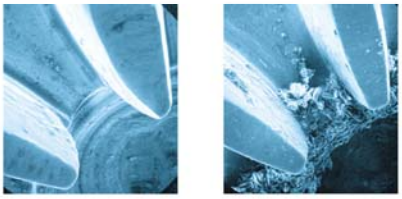
Purge your lines of water before leaving each afternoon and for the weekend. This may be done with the DCI dual bottle clean water system by flipping the toggle switch on the front of the unit to "Purge". Then activate the handpieces and syringes until only air comes through the water lines. This can also be done by placing an empty bottle onto your existing clean water system and running the handpiece tubings and water lines until only air comes out. This prevents the stagnant water from sitting in the lines overnight.

Following this protocol will help you to provide your patients with High Quality H2O!

Clean Lubricate Save

Prolong the life of your handpieces at minimal cost. In 35 seconds, Assistina 301 Plus automatically sends lubricant and cleaning solution through the channels of your handpieces, motors, and attachments—all for only 1.5 cents per cycle. Easy.

- Air-operated
- Self-cleaning ports to prevent blockage
- Works with most handpieces



Inside a handpiece housing after being put through Assistina's unique clean-and-lubricate system (left) vs. the spray-can method (right).

Contact A-dec at 1.800.547.1883 or visit a-dec.com to learn more.

Handpiece Maintenance

Waterline Maintenance

Maintain

When it comes to effective waterline asepsis, ICX® is proven. Drop a single tablet into your dental-unit water bottle before each filling and ICX immediately goes to work. The effervescing formula is patented to prevent accumulation of odor-causing bacteria. No measuring. Zero mixing. Never a mess. For keeping it clean, it's simple.

Learn more about waterline maintenance. Contact A-dec today.

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Cabinets
Handpieces
Maintenance

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- Patented structure features a stronger nosepiece and wider bridge for an amazingly comfortable fit.
- Super lightweight frames and superior flexibility work together to deliver all-day comfort.
- Unsurpassed frame durability is just what you'd expect from a trusted leader recognized for high-quality, reliable eyewear.

Buy 10 Pairs Get 2 Free
(No mix and match)

Pricing and offer good: 1/1/15 - 3/31/15

Item Code	Description	Price
25679	V30 Clear Anti-Fog Lens, Black Frame, Standard	$5.79/ea
38478	V30 Clear Anti-Fog Lens, Black Frame with Pink Tips, Small	$5.79/ea
38480	V30 I/O Hard Coat Lens, Black Frame with Green Tips, Small	$5.79/ea

Introducing NEMESIS* S an alternative fit for narrow faces
Sporty single-lens wraparound protection
99.9% UV protection
Comfortable curved earpiece design to help prevent slipping
Soft-touch temples for added comfort
Lightweight polycarbonate lens

Faces come in all different shapes and sizes. That's why the wildly popular NEMESIS* Safety Eyewear comes in both the original model – and NEMISIS* S Eyewear that's designed for smaller and slimmer faces.

NDI Since 1905

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Quala Dental Products

Quality Products for the caring professional

Quala Biological Monitoring

Offers everything you need to verify sterilizer performance. May be used to test all sterilization processes - steam, chemical vapor, dry heat and ethylene oxide. Steam cycle test results in as little as 24 hours. Easy-to-use, reliable method of testing sterility.

CODE	DESCRIPTION	PRICE
Biological Monitoring		
Q602412	Mail-In Value Test Strips *Includes: (2) Bacterial Spore Test Strips & (1) Control Strip, Postage Prepaid, 12 tst/bx*	$93.19
Q602448	Mail-In Value Test Strips *Includes: (2) Bacterial Spore Test Strips & (1) Control Strip, Postage Prepaid, 48 tst/bx*	$323.49
Q602452	Mail-In Value Test Strips *Includes: (1) Bacterial Spore Test Strip & (1) Control Strip, 52 tst/bx*	$185.29

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[Image Processors] Maintenance

In general - their are two types of X-ray Image Processors: Traditional Film Based Processors and Digital Phosphor Storage Plate Processors. Film processors, due to the chemicals involved, require more extensive regular maintenance and are more costly to keep up. Digital scanners on the other hand require very minimal maintenance and minimal time commitment.

When an image has been taken on a patient and you are waiting on the information from that image, it is very frustrating to find that the processor has gone down. With proper maintenance however, both processor types will provide years of trouble free service.

Film Processor Maintenance

The film processor is designed to run for years with very few problems. If properly maintained, many processors have lasted 15 - 20 years. With the rapid onset of digital imaging, traditional film processors and their thorough maintenance is diminishing. However, there are still a lot of processors out there. And with proper care, they will last a long time.

With processors, you have two different developing chemicals in an enclosed container along with water vapor, gears, motors etc. Because of this environment, the recommended cleanings for this machine are not optional. In order for the processor to continue running, processing films that are very diagnostic, and lasting for years, the cleanings have to be done and done correctly.

Most roller based processors require 3 types of cleanings: Weekly, Monthly and Quarterly. The weekly cleaning is the most simple. The monthly and quarterly cleanings can become involved and require that the staff member that is assigned this task have time built into their work schedule to accomplish this correctly. The detailed steps to these cleanings are too lengthy to publish in this article. Each processor varies slightly in the directions as well. If you need documentation on how to correctly clean your processor, your Nashville Dental account representative can help you obtain the correct manual for your machine.

Maintenance Considerations:

When cleaning, remember that contaminated "DEVELOPER" can cause a lot of film problems. Even a single drop of fixer in the developer solution can cause problems. This can happen by manually adding fixer, removing the fixer transport, running chairside endo films back through the processor for archiving. (the fixer from the chairside dip tanks can be enough to contaminate the developer.) Other sources are running cleaning films through more than one time, failing to rinse tank and rollers thoroughly after using cleaning chemicals, and using soap or other detergents to clean the rollers can cause contamination. In general, as long as you follow the manufacturer's instructions you should be able to avoid the following problems.

How To Diagnose Contaminated Developer -

One or more of these symptoms indicates contamination:

- Ammonia smell
- Dark or black developer
- Black deposits on bottom of developer tank
- Gray stains on white gears on side of developer rack
- Black streaks or smudges on films
- Poor film density (blacks are only dark gray)
- Poor film clarity

Weekly:

1. Remove Rack Assemblies (all three – developer, fixer, wash/dry transport)
2. BE VERY CAREFUL NOT TO DRIP FIXER INTO THE DEVELOPER TANK!!! This can cause poor quality films.
3. Place rack assemblies in a large sink and wet thoroughly or spray with Spray 2000 or appropriate cleaner.
4. Scrub thoroughly with a soft bristle brush or with sponge that comes supplied with Air Techniques developer and fixer.
   (Note: use separate sponges or brushes on developer and fixer transports.)
5. Be sure to Rotate rollers while scrubbing
6. Rinse thoroughly
7. Return transports to Processor.
8. Always Process a Cleaning Film after cleaning.

Cleaner options:
Air Techniques Formula 2000,
Dent-X Easy Clean Powder
Clear Image Cleaner

Cleaning films should be used routinely to remove deposits and build-up from the rollers.

Roller Transport Cleanup Film - Carestream Health
Consists of a 7 mil Estar Base with a non-silver gelatin coating on each side. 8" x 10". 100/pk
1039205. . . . . .216.99

Clean Image
Clean-up Sheets - Southland Dist.
A daily clean-up sheet is step 1 of a 3-part cleaning system. Used daily, it removes residue from transport rollers andwebs that cause film to be grainy.
50 sheets/bx
CI0810. . . . . .68.99

Monthly & Quarterly Cleanings:

Review Manual for your Processor. This Monthly cleaning can take up to an hour and the Quarterly cleaning can take up to 1 1/2 hours to do. Schedule appropriate time for staff to do this or call Nashville Dental to schedule one of our techs to perform this service for you.

Scan-X Phosphor Plate Scanning Units require little maintenance, but they do need to be maintained to prevent interruptions in service.

Weekly -

1. Use canned air to blow out dust from the scanner where plates are inserted. Remove the plate guides and blow air into unit removing dust. With a slightly damp cloth - wipe down unit to remove any dust.
2. Run a cleaning sheet through the scanner using the panoramic image mode. Cleaning sheets should be inserted with stick side facing out. Follow instructions on the cleaning sheet box.
3. Scan-X units have maintenance kits, just like a car or other mechanical investment. The roller transport belts and springs need to be replaced at two years (kit B7920). At 4 years of use, it is recommended to replace the transport assembly - (kit B7434). Both of these maintenance kits require a trained service technician. Air Techniques strongly recommends adhering to this maintenance schedule to prevent untimely breakdowns in the scanning unit.
4. Phosphor plates will wear over time and have to be replaced. During use, they can become dirty or get barrier adhesive on them they should be cleaned off using an Air Techniques PSP wipe. B8910 - 50 Wipes - $68.09

ScanX Cleaning Sheets - Air Techniques
Cleaning Sheets for the ScanX are a handy and inexpensive preventive maintenance product that can be used to help keep scanners dust free.

- **Sheets are cut and specially sized for use in each scanner.**
- **Easy to use.**
- **Helps keep the scanner free of dust and hair.**
- **Run through the scanner just like imaging plates.**

Scan-X - B2020 (25pk) $257.99
Scan-X Duo - D1010 (12pk). $68.09
Scan-X I/O - B3010 (12pk). $125.09

These maintenance Kits will keep the unit running well without an interruption in film processing. They should be performed by a trained NDI service tech only.

Service Requirement Schedule for Scan-X Classic and I/O Units:
2 Year Mntc Kit - Replace transport drive belts and springs Kit - B7920
4 years - Replace complete transport belt drive belt assembly - B7434

See your Nashville Dental catalog for a full listing of cleaning supplies for film based processors.

[Dental Lab] Maintenance

While the items in the dental lab are not critical to the day to day operations like a compressor, vacuum or autoclave, they still need to be maintained to prevent inconvenient down times in the ability to make bleach trays, trim models and drain the sink without it clogging. The typical dental lab has two key equipment items that need to be maintained: A - Model Trimmer, B - Plaster Traps. There are other items that are not as universal in dental labs such as dust collectors and lab handpieces that need to be maintained, but in this article we are going to deal with the two most universally used items.

A. Model Trimmers

The Grinding Wheel:

Model Trimmers come with a variety of trimming wheels and water sources. The most common utilize a single spray bar and a coarse or medium grit wheel. In order to keep the wheel clean, enough water needs to be supplied to the wheel during use so it does not develop a clay like coating while trimming. Make sure to turn the water up as high as possible without it splattering all over the operator. Once finished trimming, let the wheel turn for several seconds with plenty of water to rinse it.

Model Trimmer Wheels of varying grits and sizes may be purchased from your NDI Account Rep.

E022	Model Trim Wheel 12” Crse	$39.99
E21A	Model Trim Wheel 10” Crse	$38.49
31A-C	Model Trimmer Wheel 10” Crs	$35.99
31A-M	Model Trimmer Wheel 10” Med	$35.99
32A-C	Model Trimmer Wheel 12” Crs	$43.99
32A-F	Model Trimmer Wheel 12” Fine	$43.99
32A-M	Model Trimmer Wheel 12” Med	$43.99
29327	Model Trimmer Wheel 10”Coarse	$45.39
13005	Model Trim Wheel 12”Crs #30292	$55.69

The Drain:

As models are trimmed, the stone gathers in the bottom of the trimmer. With plenty of water, most of the stone will flow out of the drain and into the plaster trap. Even with plenty of water, stone can still build up in the bottom of the trimmer and should be cleaned out periodically. We recommend a monthly cleaning in offices that use the trimmer heavily, such as ortho offices. A quarterly cleaning is usually sufficient for general use offices. And if your office rarely trims your models, annually will probably do it. Regardless, this cleaning will prevent an eventual clog that is much more difficult and messy to clean.

B. Plaster Traps

Fixed Plumbing Styles: Crescent Plaster Traps

These traps have a fixed lid tied into the plumbing fittings. The lid has a bucket that is fastened to the lid by wing nut bolts. The bucket then relies on blocks of wood to support the weight. The bucket requires a liner with a water spill valve. These traps, when full, require you to cut the spill valve to drain off excess water into a cup or bucket. Then the wing nuts are loosened so the bucket can be dropped down from the lid. The blocks are then removed and the bucket comes free. The liner is removed and thrown away and a new liner is inserted. The bucket is fastened again with the wing nuts and the blocks are secured. These traps will generally last a year in general use offices and quarterly to semi-annually in an ortho office.

Plaster Trap Liners:

7000403	Plaster Trap Liners (6) Clear	$12.99
C350225	Plaster Trap Liners-Crescent	$26.99

Fixed plumbing - removable trap bottles. (Gleco Traps:

These traps are certified by the plumbing association. They have a fitting that is hard plumbed to the existing plumbing fittings. The assembly has a valve that drains off the excess water allowing the trap bottle to be unscrewed from the fitting. The bottle is then capped and disposed of and a new bottle is screwed into place. A gasket remains in the fitting and periodically needs to be removed, cleaned and lubed with soap. Replacements are available. The Gleco trap allows the staff to visibly check the sediment level in the jar. When it reaches the line, it’s time to change the trap out.

Gleco Kits:

10012	Gleco Plaster Trap Gt64 1/2Gal	$99.99

Gleco Trap Refills:

10013	Gleco Refill Gt64C 1/2Gal (6)	$30.00
10015	Gleco Refill Gt128C Gal (4)	$30.00
10016	Gleco Refill Gt32C Quart (12)	$30.00
10090	O-Ring Seal,*(2-Pk),Gleco Trap	$5.00

Flexible Plumbing Trap-Eze traps

These traps have flexible drain hoses attached to the existing plumbing. The loose ends fit into two rubber friction grip fittings in the top of a 5 gallon or 3.5 gallon plaster trap bucket. The bucket has a large capacity for stone and sediment and is easy to visibly monitor the sediment levels. When the bucket gets 3/4 full, it should be replaced. Keeping a towel handy, with gloved hands, remove one of the flexible hoses from the top of the trap. Catch excess water in the towel or a cup if you’re quick enough. Once the excess water has drained off, remove the remaining hose. Remove the old bucket and recap it with the caps that come on the refill bucket. Discard the old bucket in dumpster and replace with new bucket.

Trap-Eze Plaster Trap Kit:

62100	Trap-Eze Disp 3.5 Gal Kit	$46.69
62110	Trap-Eze Disp 5 Gal Kit	$49.99

Buffalo Replacement Trap Buckets:

62106	Trap-Eze Disp 3.5 Gal Refill	$20.49
62112	Trap-Eze Disp 5 Gal Refill	$22.29

Computer Technology [Hardware & Software] Maintenance

In today's dental office, computerization is the norm. Computer systems are in place in most offices to run: business systems, schedules, clinical charting, clinical diagnosis and patient education. In many offices, every room has instant access to each of these software tools through the office network. This network, like many other dental items is a costly start-up expense to the office. If you elect to computerize your office, you need to protect this investment. This means a few new maintenance items need to be considered and budgeted for in the operating expenses:

1. **Software Support and Updates**
2. **Hardware Obsolescence**
3. **Network Maintenance**

Why do I need this maintenance & support contract and should I continue paying for it?

Uncontrolled changes in Operating Systems:
All computers are driven by "Operating Systems." An operating system is the software that drives the computer to run all other installed software and communicate with other computers and the internet. "WINDOWS" used to be associated with what one would look out of or into to see through a wall. In our culture, "WINDOWS" is a common term that refers to the worlds largest and most used PC operating system. Unless you are running in a Macintosh environment, your system is probably running one of the Microsoft Windows operating systems. Microsoft has released at least 6 new versions of Windows since 1998. As these new versions are released, other changes to the operating system you are using are often updated on your system without you ever knowing it. These automatic updates are a part of the Windows platform. While they do in many cases make your computer more secure from internet threats and viruses, they can affect the way your clinical and business software run on your system. Each time a new version is released, all other software providers have to adapt their programs to work in the new environment. These adaptations are released in "updates" that help the program to run in the new operating system. So if you are using XL Dent as your practice management software and your imaging software is ImageXL, the company that writes these programs is always monitoring the Windows changes and adapting the program to work in the newest environments.

User requested changes:
As software is used, the users often find changes they would like to see made or additions they would like to have available on the software. As these requests are made to the writers, they are prioritized based on number of requests and functionality. Since so many people use the software and have their own perspective of managing their practice information, these requests can turn into really positive additions to the software. Often updates are small, hard to see changes that may help digital images look better, or speed up processes. Other changes are easier to see like new reports, charts or user tools. As these changes are made, they are usually available through the Get Updates tool on your help menu.

Regardless of what software you choose to run the different aspects of your practice, it is wise to keep your system up to date. This is very important so that as changes are made, your system will be able to handle the new tools as well the new changes in operating systems. If you let your system get too far out of date, it can cause the software to slow down and eventually stop working. Then you have to call in the software specialist to spend hours sorting out the problems.

Network maintenance and Hardware obsolescence:

A computer network can be complex. With multiple softwares and an ever-changing operating system along with network and Internet security software, conflicts can pop up. Having a relationship with a good local network maintenance company that has experience with Dental software and systems, is a really good partnership to have.

As software changes happen, at some point the computers you bought 3 years ago, don't seem to be as fast. They used to work really well and the software was perfect, but now it's slow and sometimes locks up. Software changes often mean more processes are running in the background. These can use up operating memory. As these new processes are created, new hardware systems are created that are capable of doing more processes and at faster speeds. Eventually your computers will come to a halt and have to be replaced. If you are not planning this in your office budget, when the expense hits, it can really take the wind out of a good month or year.

Do yourself a favor, if you're running your office in a computerized environment, plan for support and maintenance and make yourself a monthly payment to the hardware replacement and reinvestment fund for down the road. These ongoing costs are easier to manage when the money is available at the time upgrades needed.